

Datasheet for #sbcw25711 DN

Recommendations:

Please read the User Manual and have a look at the FAQ at <https://www.alpeslasers.ch/resources/#faq>

WARNING: Operating the laser with higher current or voltage than specified in this document may cause damage and will result in loss of warranty, unless Alpes Lasers has permitted to do so!

WARNING: Beware of the polarity of the laser. This laser has to be powered with negative bias and positive bias on the specific zones drawn below. To be used with a high compliance CW laser driver capable of reaching the operating current and voltage indicated in this datasheet, or up to 2.5A/20V.



Figure 1: Mechanical and electrical interface for #sbcw25711 DN (please note that AlN submount numbering is A0X4Z)

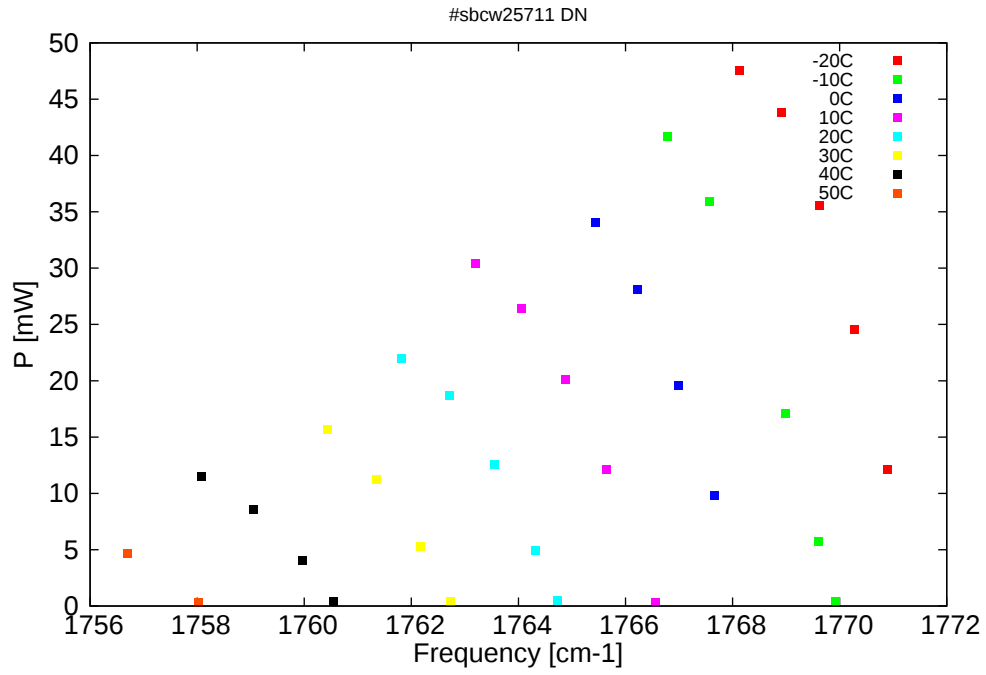


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

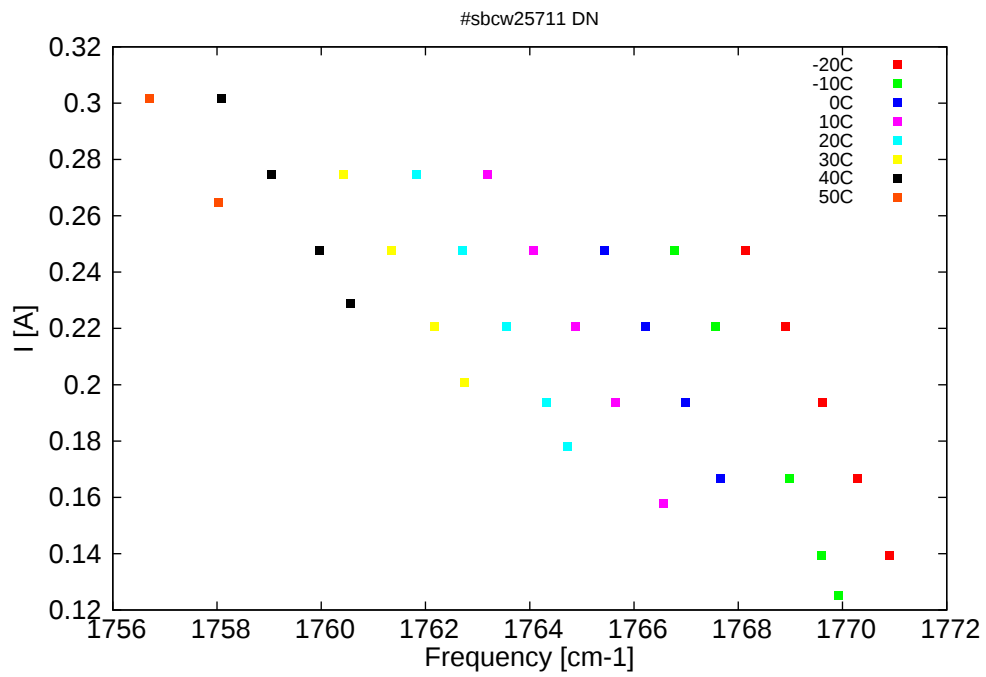


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda[\text{nm}]$	$\nu[\text{cm}^{-1}]$	P[mW]	Temp[°C]	$U_{LASER}[\text{V}]$	I[A]
5646.8	1770.9	12.1	-20	9.49	0.14
5648.8	1770.3	24.6	-20	9.81	0.167
5650.9	1769.6	35.5	-20	10.11	0.194
5653.2	1768.9	43.8	-20	10.42	0.221
5655.7	1768.1	47.5	-20	10.71	0.248
5650	1769.9	0.4	-10	9.15	0.125
5651	1769.6	5.8	-10	9.33	0.14
5653	1769	17.1	-10	9.64	0.167
5657.5	1767.6	35.9	-10	10.23	0.221
5660	1766.8	41.7	-10	10.53	0.248
5657.2	1767.7	9.8	0	9.48	0.167
5659.4	1767	19.6	0	9.77	0.194
5661.8	1766.2	28.1	0	10.06	0.221
5664.3	1765.4	34.1	0	10.34	0.248
5660.7	1766.6	0.3	10	9.23	0.158
5663.7	1765.6	12.1	10	9.62	0.194
5666.1	1764.9	20.1	10	9.9	0.221
5668.7	1764.1	26.4	10	10.17	0.248
5671.5	1763.2	30.4	10	10.45	0.275
5666.6	1764.7	0.5	20	9.3	0.178
5667.9	1764.3	4.9	20	9.47	0.194
5670.4	1763.5	12.5	20	9.74	0.221
5673.1	1762.7	18.7	20	10.01	0.248
5675.9	1761.8	22	20	10.28	0.275
5673	1762.7	0.4	30	9.4	0.201
5674.8	1762.2	5.3	30	9.59	0.221
5677.5	1761.3	11.3	30	9.86	0.248
5680.4	1760.4	15.7	30	10.11	0.275
5680	1760.6	0.4	40	9.53	0.229
5682	1760	4.1	40	9.71	0.248
5684.9	1759.1	8.5	40	9.96	0.275
5688	1758.1	11.5	40	10.2	0.302
5688.2	1758	0.3	50	9.71	0.265
5692.5	1756.7	4.7	50	10.04	0.302

Table 1: Singlemode optical output power as function of operating parameters.

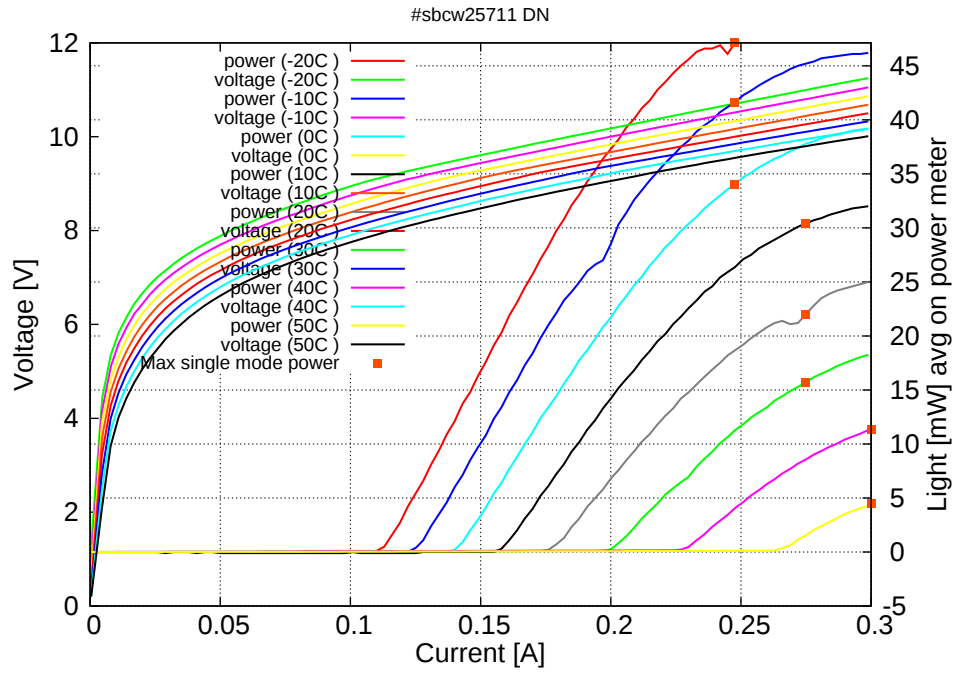


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.11A$ / $V_{th}=9.1V$ (2-wires measurements). Maximum operation current: 0.25A between -20C and 0C, 0.275A between 10C and 30C, 0.30A between 40C and 50C.

Figure 3: spectra at different temperatures for various DC currents

